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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,787	04/27/2001	Sharon Barkai	1069-US	7334

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EXAMINER	
RYMAN, DANIEL J	
ART UNIT	**PAPER NUMBER**
2665	

DATE MAILED: 08/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/842,787	BARKAI ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 April 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/28/02, 2/10/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to because ref. "114" in Fig. 1B should be labeled "130" to match page 7, line 19 of the specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Chatwani et al. (USPN 5,586,267).

4. Regarding claim 13, Chatwani discloses a method for topology discovery in an ATM network, the method comprising: configuring a plurality of active ports of a plurality of ATM devices with a VPI/VCI known not to exist in said network (meta-signaling VPI/VCI) (col. 14, lines 30-37 and col. 16, lines 6-15) where the meta-signaling VPI/VCI does not exist in the network at the start of the network; establishing a VC between a transmission source within said network and a selected one of said ATM devices along a known path, wherein said selected ATM device has at least one target active port for which a link to any other of said ports is not known to exist in said network (col. 9, line 62-col. 10, line 11 and col. 12, lines 5-14) where the claim language does not sufficiently link the first limitation and second limitation, see below; transmitting a cell from said transmission source to said selected ATM device along said path and via said target port (col. 9, line 62-col. 10, line 11 and col. 12, lines 5-14); detecting the arrival of said cell at any other of said ports (col. 9, line 62-col. 10, line 11 and col. 12, lines 5-14) where it is inherent that each port will detect cells entering the port; and where said cell arrives at only one other of said ports, maintaining in a topology graph a link between said target port and said one other of said ports (col. 9, line 62-col. 10, line 11 and col. 12, lines 5-14).

The claim language does not sufficiently link the first limitation and second limitation since the claim does not require that the established VC of the second limitation be the same VC as the VC of the configured VPI/VCI of the first limitation. The claim only requires that a plurality of ports are configured with a VPI/VCI and that a separate VC connection is established in the network. Thus, for example, the claim allows a plurality of devices to be configured with a

VPI/VCI of 0/1 and the separate connection to be established over 2/4. Here, only the selected ATM device will receive the separate VC connection 2/4, such that the third through fifth limitations of the claim are met.

5. Regarding claim 14, Chatwani discloses that said configuring step comprises configuring only those of said ports for which a link to any other of said ports is not known to exist in said network (col. 14, lines 30-37 and col. 16, lines 6-15) where at start-up links between ports are not known to exist between any ports.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1, 2, 4-9, 11, and 12, are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva et al. (USPN 6,654,802) in view of Chatwani et al. (USPN 5,586,267).

8. Regarding claims 1 and 6, Oliva discloses a method for topology discovery in a network (col. 1, lines 20-25), the method comprising: identifying an active connection between two network device ports (col. 3, lines 7-23); and maintaining a link between said network device ports in a topology graph where said active connection has the same port identifiers stored at both of said ports (col. 3, lines 7-23; col. 6, lines 5-8; and col. 7, lines 32-41).

Oliva does not expressly disclose that the network is an ATM network, that the active connection is an active VC, or that the active connection has the same VPI/VCI at both of said ports. However, Oliva does disclose that the port identifiers are transmitted in overhead of the

system (col. 3, lines 7-15). Chatwani teaches, in a system for automatic topology discovery, that in an ATM network (col. 1, lines 13-19) an active connection is an active VC (col. 9, line 62-col. 10, line 11) and that the VPI/VCI can be used to store port identifiers and to identify a node (col. 14, line 23-27 and col. 16, lines 6-14) where the VPI/VCI is overhead for the system. Chatwani's system performs network discovery without flooding the network (col. 6, lines 23-25). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to implement a topology discovery mechanism in an ATM network, where an active connection is an active VC, by storing the port identifiers and node identifiers in the VPI/VCI in order to perform network discovery without flooding the network.

Further regarding claim 6, Oliva in view of Chatwani discloses removing from said topology graph said link between said ATM device ports where no active VC having the same VPI/VCI at both of said ports is identified for said link (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55).

9. Regarding claim 2, Oliva in view of Chatwani discloses that said identifying step comprises identifying said active VC as being a VC having a traffic indicator at either of said ports indicating that a flow of bi-directional network traffic has been detected within a user-defined period of time (Oliva: col. 5, lines 10-11 and col. 7, lines 32-41 and Chatwani: col. 10, lines 3-11 and col. 19, lines 46-55).

10. Regarding claims 4 and 11, Oliva in view of Chatwani suggests that said maintaining step comprises maintaining where no other ATM device port in said network has a VPI/VCI for an active VC that is the same as the VPI/VCI for said active VC identified at said ports or for said

link (Chatwani: col. 16, lines 15-41) where each VPI/VCI is unique for a particular port since this value identifies this port.

11. Regarding claim 5, Oliva in view of Chatwani discloses that said identifying step comprises identifying said active VC in a topology graph of interconnections between a plurality of ATM device ports for which port VC information has been gathered (Oliva: col. 5, line 59-col. 6, line 8 and Chatwani: col. 19, lines 46-55).

12. Regarding claim 7, Oliva in view of Chatwani discloses that said removing step comprises removing where at least one of said ports has no active VC (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55).

13. Regarding claim 8, Oliva in view of Chatwani suggests that said removing step comprises removing where an active VC whose VPI/VCI is not defined is found for at least one of said ports. Oliva in view of Chatwani discloses removing a VC when there is a problem with the VC (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55). Oliva in view of Chatwani also disclose that the VPI/VCI values are strictly defined in the network (Chatwani: col. 16, lines 15-41). Thus, if a VPI/VCI that is not defined is found to be active then it is obvious that a problem has occurred on the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the removing step comprise removing where an active VC whose VPI/VCI is not defined is found for at least one of said ports.

14. Regarding claim 9, Oliva in view of Chatwani suggests that said removing step comprises removing where an active VC identified at one of said ports is not an active VC at the other of said ports. Oliva in view of Chatwani discloses removing a VC when there is a problem with the VC (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55). Oliva in view of Chatwani

also disclose that the VPI/VCI should be active at both ports in order to conclude that the link is active (Oliva: col. 3, lines 7-23; col. 6, lines 5-8; and col. 7, lines 32-41 and Chatwani: col. 14, line 23-27 and col. 16, lines 6-14). Thus, if a VPI/VCI is not active on both ports then it is obvious that a problem has occurred on the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the removing step comprise removing where an active VC identified at one of said ports is not an active VC at the other of said ports.

15. Regarding claim 12, Oliva in view of Chatwani suggests removing from said topology graph link between said ATM device ports where another ATM device port in said network has a VPI/VCI for an active VC that is the same as the VPI/VCI for said active VC identified for said link. Oliva in view of Chatwani discloses removing a VC when there is a problem with the VC (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55). Oliva in view of Chatwani also disclose that the VPI/VCI values are strictly defined in the network (Chatwani: col. 16, lines 15-41). Thus, if a VPI/VCI is defined for two ports then it is obvious that a problem has occurred on the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to remove from said topology graph link between said ATM device ports where another ATM device port in said network has a VPI/VCI for an active VC that is the same as the VPI/VCI for said active VC identified for said link.

16. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oliva et al. (USPN 6,654,802) in view of Chatwani et al. (USPN 5,586,267) as applied to claims 1 and 6 above, and further in view of Schenkel et al. (USPN 5,926,462).

17. Regarding claims 3 and 10, Oliva in view of Chatwani does not expressly disclose that said maintaining step comprises maintaining where said devices and said ports have compatible operational profiles. Shenkel teaches, in a system for topology discovery, using traffic volumes transmitted from and received by ports, which, as broadly defined, comprise an operational profile, in order to determine network topology in a general manner (col. 1, line 60-col. 2, line 14). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the maintaining step comprise maintaining where said devices and said ports have compatible operational profiles in order to implement topology discovery in a general manner.

Further regarding claim 10, Oliva in view of Chatwani in further view of Shenkel suggests that said removing step comprises removing where said devices or said ports have incompatible operational profiles. Oliva in view of Chatwani in further view of Shenkel suggests removing a VC when there is a problem (Oliva: col. 7, lines 33-41 and Chatwani: col. 19, lines 46-55). Thus, if the operational profiles do not match then it is obvious that a problem has occurred on the network. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the removing step comprises removing where said devices or said ports have incompatible operational profiles.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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